

IN THE CLAIMS:

1. (Currently Amended) A method performed by a controller coupled to a computer storage network for configuring thea computer storage network ~~that includes, the computer storage network comprising~~ a plurality of devices coupled together through full duplex bi-directional ports, each of said devices comprising at least two of the ports, each of said ports having at least two states, said network further comprising an initiator coupled to said plurality of devices, wherein said initiator can issue a request for any one of said ports in said plurality of devices to assume any one of said at least two states,

wherein each of said ports, when in a first of said at least two states and as part of one of said plurality of devices, is able to bi-directionally communicate with another of said ports in another of the plurality of devices,

wherein each of said ports, when in a second of said at least two states and as part of one of said plurality of devices, is coupled to itself by having an output thereof coupled to an input thereof,

said method comprising:

inhibiting said initiator from issuing any requests for any of said ports of said plurality of devices to assume one of said at least two states,

sending data to said initiator, said data including a port information map describing a desired state for ~~selected~~ each of the ports in said plurality of devices, and

enabling, after inhibiting and sending, said initiator to issue requests for said selected ports in said plurality of devices to assume corresponding desired states described by said data, wherein each of said desired states corresponds to one of the at least two states.

2. (Previously Presented) The method of claim 1, further comprising after inhibiting, receiving data from said initiator describing an actual state of a given port of said selected ports.
3. (Previously Presented) The method of claim 2, further comprising after receiving, determining said desired state of said given port based on said actual state of said given port.
4. (Previously Presented) The method of claim 1, wherein said plurality of devices comprises a web, said computer network includes a plurality of webs, and each of said plurality of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices.
5. (Previously Presented) The method of claim 1, wherein said plurality of devices comprises a web, prior to inhibiting said computer network has M number of webs, and each of said M number of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices, and after enabling said computer network has N number of webs, wherein each of said N number of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices, where N is not equal to M.
6. (Previously Presented) The method of claim 1, wherein said initiator is one of a plurality of initiators coupled to the plurality of devices, and wherein inhibiting comprises inhibiting said plurality of initiators from issuing any requests for any of said ports of said plurality of devices to assume one of the at least two states, and wherein enabling comprises enabling said plurality of initiators in a determined sequence.
7. (Original) The method of claim 1, wherein said desired state is specified by a user.
8. (Original) The method of claim 1, wherein said computer network conforms to American National Standards Institute (ANSI) Standard X3T10.1.

9. (Currently Amended) A controller coupled to a computer storage network for configuring ~~thea~~ computer storage network, the computer storage network comprising that includes a plurality of devices coupled together through full duplex bi-directional first ports, each of said devices comprising at least two of the ports, said network further comprising an initiator coupled to said plurality of devices, wherein said initiator can issue a request for any one of said ports in said plurality of devices to assume any one of said at least two states,

wherein each of said ports, when in a first of said at least two states and as part of one of said plurality of devices, is able to bi-directionally communicate with another of said ports in another of the plurality of devices,

wherein each of said ports, when in a second of said at least two states and as part of one of said plurality of devices, is coupled to itself by having an output thereof coupled to an input thereof,

said controller comprising:

means for inhibiting said initiator from issuing any requests for any of said ports of said plurality of devices to assume one of the at least two states,

means for sending data to said initiator, the data include a port information map describing a desired state for ~~selected each of the~~ ports in said plurality of devices, and

means for enabling said initiator to issue, after the inhibit and send operations, requests for said selected ports in said plurality of devices to assume corresponding desired states described by said data, wherein each of said desired states corresponds to one of the at least two states.

10. (Previously Presented) The controller of claim 9, further comprising means for receiving data from said initiator describing an actual state of a given port of said selected ports.

11. (Previously Presented) The controller of claim 10, further comprising means for determining said desired state of the given port based on said actual state of the given port.

12. (Previously Presented) The controller of claim 9, wherein said plurality of devices comprises a web, said computer network includes a plurality of webs, and each of said plurality of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices.

13. (Previously Presented) The controller of claim 9, wherein said plurality of devices comprises a web, said computer network has M number of webs, and each of said M number of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices, and said controller configures said computer network to yield N number of webs, wherein each of said N number of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices, where N is not equal to M.

14. (Previously Presented) The controller of claim 9, wherein said initiator is one of a plurality of initiators coupled to the plurality of devices, and wherein said inhibiting means inhibits said plurality of initiators from issuing any requests for any of said ports of said plurality of devices to assume one of the at least two states, and wherein said enabling means enables said plurality of initiators in a determined sequence.

15. (Currently Amended) A storage media including instructions for controlling a processor coupled to a computer storage network, the processor that, in turn, configures thea computer storage network, the computer storage network comprising~~that includes~~ a plurality of devices coupled together through full duplex bi-directional ports, each of said devices comprising at least two of the ports, each of said ports having at least two states, said network further comprising an initiator coupled to said plurality of devices, wherein said initiator can issue a request for any one

of said ports in said plurality of devices to assume any one of said at least two states,

wherein each of said ports, when in a first of said at least two states and as part of one of said plurality of devices, is able to bi-directionally communicate with another of said ports in another of the plurality of devices,

wherein each of said ports, when in a second of said at least two states and as part of one of said plurality of devices, is coupled to itself by having an output thereof coupled to an input thereof,

said storage media comprising:

means for controlling said processor to inhibit said initiator from issuing any requests for any of said ports of said plurality of devices to assume one of said at least two states,

means for controlling said processor to send data to said initiator, the data including a port information map describing a desired state for ~~selected~~ each of the ports in said plurality of devices, and

means for controlling said processor to enable, after the inhibit and send operations, said initiator to issue requests for said selected ports in said plurality of devices to assume corresponding desired states described by said data, wherein each of said desired states corresponds to one of the at least two states.

16. (Previously Presented) The storage media of claim 15, further comprising means for controlling said processor to receive data from said initiator describing an actual state of a given port of said selected ports.

17. (Previously Presented) The storage media of claim 16, further comprising means for controlling said processor to determine said desired state of said given port based on said actual

state of said given port.

18. (Previously Presented) The storage media of claim 15, wherein said plurality of devices comprises a web, said computer network includes a plurality of webs, and each of said plurality of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices.

19. (Previously Presented) The storage media of claim 15, wherein said plurality of devices comprises a web, said computer network has M number of webs, and each of said M number of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices, and said processor configures said computer network to yield N number of webs, wherein each of said N number of webs includes a respective initiator and a respective plurality of devices, each respective initiator coupled to ports for its respective subset of devices, where N is not equal to M.

20. (Previously Presented) The storage media of claim 15, wherein said initiator is one of a plurality of initiators coupled to the plurality of devices, and wherein said storage media comprises means for controlling said processor to inhibit said plurality of initiators from issuing any requests for any of said ports of said plurality of devices to assume one of the at least two states, and means for controlling said processor to enable said plurality of initiators in a determined sequence.

21. (Currently Amended) In a storage network that comprises at least one web, each of the at least one webs comprising at least one initiator and a plurality of storage devices coupled together through full duplex bi-directional ports, each of the storage devices comprising at least two of the ports, each of the ports having at least two states, each initiator able to issue requests for ports in storage devices in the web to which the initiator belongs to assume any one of the at least two states, wherein each of the ports when in one of the storage devices and in a first of the at least two states is able to bi-directionally communicate with another of the ports in another of

the plurality of storage devices, wherein each of the ports when in a second of the at least two states is coupled to itself by having an output thereof coupled to an input thereof, a method performed on a controller in the storage network, comprising:

preventing a given initiator in a given web from responding to error messages from storage devices in the given web;

sending a map to the given initiator, the map describing a desired state for each of the ports of storage devices in the given web, wherein each of the desired states corresponds to one of the at least two states;

commanding, after preventing and sending, the given initiator to issue requests for the ports of the storage devices in the given web to assume corresponding desired states described by the map; and

allowing, after commanding, the given initiator to respond to error messages from storage devices in the given web.

22. (Previously Presented) The method of claim 21, wherein the given initiator would respond to an error message by issuing a request for a port of the storage device issuing the error message to assume a given one of the at least two states.

23. (Previously Presented) The method of claim 21, wherein:

the at least one web comprises a plurality of webs;

preventing further comprises preventing each of the initiators in the network from responding to error messages from storage devices in a corresponding web;

sending further comprises sending maps to each of the initiators in the network, each of the maps describing a desired state for each of the ports of the storage devices in a corresponding one of the webs, wherein each of the desired states corresponds to one of the at least two states;

commanding further comprising commanding each of the initiators in the network to issue requests for the ports of the storage devices in a corresponding web to assume corresponding desired states described by a corresponding map; and

allowing further comprises allowing each of the initiators in the network to respond to error messages from storage devices in a corresponding web.

24. (Previously Presented) The method of claim 21, wherein:

the at least one web comprises a plurality of webs;

preventing further comprises preventing each of the initiators in the network from responding to error messages from storage devices in a corresponding web;

sending further comprises sending a map to each of the initiators in the network, the map describing a desired state for each of the ports of the storage devices in the network, wherein each of the desired states corresponds to one of the at least two states;

commanding further comprises commanding each of the initiators in the network to issue requests for the ports of the storage devices in a corresponding web to assume corresponding desired states described by the map; and

allowing further comprises allowing each of the initiators in the network to respond to error messages from storage devices in a corresponding web.

25. (Previously Presented) The method of claim 24, wherein each of the initiators is assigned an order commanding further comprises individually commanding each of the initiators in the network to issue requests for the ports of the storage devices in a corresponding web to assume corresponding desired states described by the map, wherein individual commands to each of the initiators are issued to each of the initiators in a sequence defined by the order.

26. (Previously Presented) The method of claim 21, further comprising commanding the given initiator to determine actual states of the ports of the storage devices in the given web.

27. (Previously Presented) The method of claim 26, further comprising:

determining if the actual states of the ports in the storage devices in the given web match the desired states of the ports in the storage devices in the given web; and

in response to a determination that the actual states and desired states of the ports in the storage devices in the given web do not match, repeating the operations of preventing, sending, commanding the given initiator to issue requests, and allowing.

28. (Previously Presented) The method of claim 21, wherein the initiators able to issue requests for ports in storage devices in the web to which the initiators belongs to assume any one of the at least two states are master initiators, and the network comprises at least one additional initiator that is not able to issue requests for ports in storage devices in the web to which the at least one additional initiator belongs to assume any one of the at least two states.

29. (Previously Presented) The method of claim 21, wherein the map describes a desired state for each of the ports of storage devices in the given web and a desired state for each of at least one port in a storage device not in the given web but to which the given initiator is coupled.

30. (Previously Presented) A controller in a storage network, the storage network comprising at

least one web, each of the at least one webs comprising at least one initiator and a plurality of storage devices coupled together through full duplex bi-directional ports, each of the storage devices comprising at least two of the ports, each of the ports having at least two states, each initiator able to issue requests for ports in storage devices in the web to which the initiator belongs to assume any one of the at least two states, wherein each of the ports when in one of the storage devices and in a first of the at least two states is able to bi-directionally communicate with another of the ports in another of the plurality of storage devices, wherein each of the ports when in a second of the at least two states is coupled to itself by having an output thereof coupled to an input thereof,

wherein the controller is configured to prevent a given initiator in a given web from responding to error messages from storage devices in the given web, configured to send a map to the given initiator, the map describing a desired state for each of the ports of storage devices in the given web, wherein each of the desired states corresponds to one of the at least two states, the controller further configured to command, after the prevent and send operations, the given initiator to issue requests for the ports of the storage devices in the given web to assume corresponding desired states described by the map, and the controller additionally configured to allow, after the command operation, the given initiator to respond to error messages from storage devices in the given web.